We claim:

1. A method for patterning a multilayered conductor/substrate structure comprising the steps of:

providing a multilayered conductor/substrate structure which includes a plastic substrate and at least one conductive layer overlying the plastic substrate; and

irradiating the multilayered conductor/substrate structure with ultraviolet radiation such that portions of the at least one conductive layer are ablated therefrom.

2. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the ultraviolet radiation is spatially incoherent.

3. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the ultraviolet radiation has a wavelength in the mid-UV range.

4. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the irradiating step comprises employing an excimer laser to ablate portions of the at least one conductive layer.

5. The method for patterning a multilayered conductor/substrate structure of claim 4 wherein the step of employing the excimer laser comprises controlling the excimer laser in consideration of how well the at least one conductive layer absorbs radiation at particular wavelengths.

6. The method for patterning a multilayered conductor/substrate structure of claim 4 wherein the step of employing the excimer laser comprises controlling the excimer laser to image a pattern from a mask onto the at least one conductive layer.

7. The method for patterning a multilayered conductor/substrate structure of claim 6 wherein the pattern includes a line gap which is at least as small as 10 μm.

8. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the multilayered conductor/substrate structure further comprises at

least one functional layer intermediate the at least one conductive layer and the plastic substrate, the at least one functional layer comprising an insulating material.

9. The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the irradiating step comprises employing and controlling an excimer laser to irradiate a portion of the at least one conductive layer such that a portion of the at least one functional layer therebeneath heats and swells a desired amount.

10. The method for patterning a multilayered conductor/substrate structure of claim 9 wherein the step of controlling the excimer laser comprises controlling a fluence of the excimer laser in consideration of an ablation threshold level of the at least one conductive layer.

11. The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the irradiating step comprises employing and controlling an excimer laser to ablate portions of the at least one conductive layer without completely decomposing the at least one functional layer therebeneath.

12. The method for patterning a multilayered conductor/substrate structure of claim 4 wherein the excimer laser is part of a projection-type ablation system.

13. The method for patterning a multilayered conductor/substrate structure of claim 12 wherein the projection-type ablation system is configured to project a broadened laser beam.

14. The method for patterning a multilayered conductor/substrate structure of claim 13 wherein the projection-type ablation system is configured to project the broadened laser beam onto a patterned mask positioned over but not touching the at least one conductive layer.

15. The method for patterning a multilayered conductor/substrate structure of claim 14 wherein the broadened laser beam irradiates at least a 50 mm^2-sized portion of the patterned mask.

16. The method for patterning a multilayered conductor/substrate structure of claim 4 wherein the excimer laser is configured to emit light at a discrete characteristic wavelength.

17. The method for patterning a multilayered conductor/substrate structure of claim 16 wherein the characteristic wavelength is 308 nm.

18. The method for patterning a multilayered conductor/substrate structure of claim 16 wherein the characteristic wavelength is 248 nm.

19. The method for patterning a multilayered conductor/substrate structure of claim 4 wherein the excimer laser is part of an ablation system configured to facilitate a roll-to-roll production process.

20. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the plastic substrate comprises polyethylene terephthalate (PET), polyethylenenapthalate (PEN), polyethersulphone (PES) or polycarbonate (PC).

21. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the plastic substrate comprises a polyolefin material.

22. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises an oxide layer.

23. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises an indium tin oxide (ITO) layer.

24. The method for patterning a multilayered conductor/substrate structure of claim 23 wherein the ITO layer is polycrystalline.

25. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises an alloy.

26. The method for patterning a multilayered conductor/substrate structure of claim 25 wherein the alloy is an indium tin oxide (ITO) alloy.

27. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises a metal-based layer.

28. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises a silver-based layer.

29. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer comprises silver and gold.

30. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer is a multilayered conductive film.

31. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer, where it has not been etched, has a thickness between around 10 nm and around 120 nm.

32. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer has a resistivity of no greater than 80 Ω/square.

33. The method for patterning a multilayered conductor/substrate structure of claim 1 wherein the at least one conductive layer has a transmissivity of at least 80%.

34. The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the at least one functional layer comprises a protective layer which serves to protect layers beneath the protective layer from laser irradiation.

35. The method for patterning a multilayered conductor/substrate structure of claim 34 wherein the layers beneath comprise a barrier layer which serves to protect the plastic substrate from environmental damage.

36. The method for patterning a multilayered conductor/substrate structure of claim 34 wherein the layers beneath include the plastic substrate.

37. The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the at least one functional layer comprises a layer of acrylic which abuts the at least one conductive layer.

38. The method for patterning a multilayered conductor/substrate structure of claim 8 wherein the at least one functional layer comprises a barrier layer which serves to protect the plastic substrate from environmental damage.

39. The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer is inorganic.

40. The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer has an oxygen transmission rate (OTR) no greater than 0.05 $cc/m^2/day$.

41. The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer has a water vapor transmission rate (WVTR) no greater than 0.05 $g/m^2/day$.

42. The method for patterning a multilayered conductor/substrate structure of claim 38 wherein the barrier layer comprises a layer of SiOx which abuts the plastic substrate.

43. The method for patterning a multilayered conductor/substrate structure of claim 8, further comprising:

an additional functional layer abutting a side of the plastic substrate that faces away from the at least one conductive layer, the additional functional layer serving to provide structural protection and/or environmental protection for the plastic substrate.